ABSTRACT

A purification system of exhaust gases in an internal combustion engine is disposed to a reaction furnace capable of reducing noxious components of the exhaust gases in an exhaust pipe of the internal combustion engine in order to purify the exhaust gases. The purification system comprises a reactor including a honeycomb carrier having a plurality of carrier cells, each of which a photocatalyst layer is coated, in the reaction furnace, and a plasma generating means having a plurality of electrode cells and mounted on an inner end and an outer end of the honeycomb carrier. The honeycomb carrier includes a photocatalyst layer coated on a wall surface of each of the carrier cells, the photocatalyst layer being activated by a plasma optical source. Further, a volume and a number of each of the electrode cells are varied depending upon the variation of that of each of the carrier cells, the carrier cells having 100 - 900 numbers per the unit area(1 inch X 1 inch). Furthermore, each of the electrodes of the plasma generating means is electrodes including a wire mesh formed by intersecting and arranging wires, the electrodes having a regular length in horizontal direction, a cross section of each of the electrodes being in the form of a honeycomb, a wire mesh roll, or a punched plate, and is closely or distantly disposed to each of the honeycomb carriers, and edges of each of the electrode cells

are arranged to be positioned at center of each of the carrier cells. The purification system further includes a plurality of reactors in the reaction furnace.

Representative drawing: Fig. 2